

**IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE**

Application No. : 10/781,170
Confirmation No. : 1812
Applicant : James W. Cornett
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Group Art Unit : 2453
Examiner : Esther Benoit
Docket No. : 2003P02869US01
Title : SYSTEMS, DEVICES, AND METHODS FOR
NETWORK WIZARDS
Amendment Filed : February 27, 2012

Mail Stop Amendment
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT AFTER FINAL REJECTION

Sir:

In response to the Final Office Action mailed January 3, 2012, Applicants request reconsideration of the patentability of the pending claims based on the following amendments and remarks.

Listing of the Claims begin on page 2.

Remarks begin on page 7.

AMENDMENTS TO THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Previously Presented) A method for configuring a network interface device from an information device communicating with the network interface device via a network, the network interface device adaptable to connect a programmable logic controller to a network, said method comprising:

 automatically enforcing, via a wizard at the information device, user compliance with a plurality of predetermined steps for a computer-assisted configuration of the network interface device, wherein the computer-assisted configuration is an OSI transport layer or above;

 providing at least one setting to the network interface device from the information device via the network;

 receiving a setting of a logical position of the network interface device relative to the programmable logic controller; and

 operating a programmable logic controller on a network via the configured OSI transport layer or above.

2. (Previously Presented) The method of claim 1, further comprising:

 requesting from a user at the information device, for the at least one setting for the network interface device.

3. (Previously Presented) The method of claim 1, further comprising:

 receiving the at least one setting for the network interface device from a user at the information device.

4. (Canceled)

5. (Original) The method of claim 1, further comprising:

receiving a count of network connections for the network interface device.

6. (Original) The method of claim 1, further comprising:

receiving a type for at least one network connection to the network interface device.

7. (Original) The method of claim 1, further comprising:

determining the at least one setting for the network interface device.

8. (Original) The method of claim 1, further comprising:

configuring the network interface device with the at least one setting.

9. (Canceled)

10. (Original) The method of claim 1, further comprising:

receiving a Q-address used by an input/output module attached to the programmable logic controller, the input/output module further couplable to the network interface device.

11. (Original) The method of claim 1, further comprising:

verifying the at least one setting for the network interface device.

12. (Original) The method of claim 1, wherein the network interface device is adaptable to communicatively couple the programmable logic controller to an ethernet network.

13. (Original) The method of claim 1, wherein the network interface device is adaptable to communicatively couple the programmable logic controller to the Internet.

14. (Original) The method of claim 1, wherein said plurality of predetermined steps are adaptable to receive at least one e-mail client configuration setting.

15. (Original) The method of claim 1, wherein said plurality of predetermined steps are adaptable to receive at least one FTP client configuration setting.

16. (Original) The method of claim 1, wherein said plurality of predetermined steps are adaptable to receive at least one FTP server configuration setting.

17. (Original) The method of claim 1, wherein said plurality of predetermined steps are adaptable to receive at least one HTTP server configuration setting.

18. (Original) The method of claim 1, wherein said plurality of predetermined steps are adaptable to receive at least one FTP server login services setting.

19. (Original) The method of claim 1, wherein said plurality of predetermined steps are adaptable to receive at least one secure HTTP server login services setting.

20. (Original) The method of claim 1, wherein said plurality of predetermined steps are adaptable to validate an FTP server address.

21. (Original) The method of claim 1, wherein said plurality of predetermined steps are adaptable to receive at least one SMTP client configuration setting.

22. (Original) The method of claim 1, wherein said plurality of predetermined steps are adaptable to configure an e-mail message to at least one user.

23. (Original) The method of claim 1, wherein said plurality of predetermined steps are adaptable to validate an e-mail server address.

24. (Original) The method of claim 1, wherein said network interface device is adaptable to communicate process data from the programmable logic controller to a network.

25. (Canceled)

26. (Original) The method of claim 1, wherein said plurality of predetermined steps comprises a help utility.

27. (Previously Presented) An apparatus for providing a wizard adaptable to configure a network interface device couplable to a programmable logic controller, said apparatus comprising:

an input processor adapted to sequentially prompt a user for at least one setting for configuring an OSI transport layer or above of the network interface device; and

an output processor adapted to provide the at least one setting from the wizard to the network interface device via a network,

wherein the at least one setting is a logical position of the network interface device relative to the programmable logic controller; and

wherein the programmable logic controller operates on the network via the configured OSI transport layer or above.

28. (Currently Amended) A system comprising:

- a network interface device adaptable to communicatively couple a programmable logic controller to a network;

- an information device adaptable to communicate with the network interface device via a network, said information device providing a wizard comprising a plurality of predetermined steps adapted to configure an OSI transport layer or above of said network interface device;

- a setting associated with the network interface device, wherein the setting is a logical position of the network interface device relative to the programmable logic controller; and

- wherein the programmable logic controller operates on the network via the configured OSI transport layer or above.

29. (Previously Presented) A machine-readable medium storing instructions for activities comprising:

- providing, at an information device in communication with a network interface device via a network, a plurality of predetermined steps adapted to sequentially prompt a user for at least one setting for configuring an OSI transport layer or above of the network interface device, wherein the at least one setting is a logical position of the network interface device relative to a programmable logic controller;

- providing a plurality of predetermined steps to provide the at least one setting from the wizard at the information device to the network interface device via the network; and

- operating the programmable logic controller on the network via the configured OSI transport layer or above.

REMARKS

I. Introduction

This Amendment is in response to the Final Office Action dated January 3, 2012.

Claim 28 is amended herein to include a period. No new matter is added.

Claims 1-3, 5-8, 10-24 and 26-29 will be pending upon entry of this Amendment.

II. 103(a) Rejection of Claims 1-3, 7-8, 10-24 and 26-29

The Office Action rejects claims 1-3, 7-8, 10-24 and 26-29 under 35 U.S.C. 103(a) as being allegedly unpatentable over U.S. Patent No. 7,890,212 to Cornett et al. ("*Cornett*") in view of U.S. Patent No. 7,058,693 to Baker, Jr. ("*Baker*").

Independent claim 1 recites, in part, "automatically enforcing, via a wizard at the information device, user compliance with a plurality of predetermined steps for a computer-assisted configuration of the network interface device, wherein the computer-assisted configuration is an OSI transport layer or above," and "operating a programmable logic controller on a network via the configured OSI transport layer or above." Independent claims 27-29 include similar features. It is submitted that neither *Cornett* nor *Baker* discloses or suggests at least these features, in addition to other features recited in claim 1.

Applicants agree with the assertion on page 3 of the Office Action that *Cornett* does not teach "the computer-assisted configuration relating to an OSI transport layer or above, and operating a programmable logic controller on a

network via the configured OSI transport layer or above.” However, contrary to the assertions in the Office Action, *Baker* does not cure the deficiencies of *Cornett*.

While *Baker* describes a control system including an Internet web interface to a network of at least one programmable logic control system running an application program for controlling output devices in response to status of input devices, where the Web interface runs Web pages from an Ethernet board coupled directly to the PLC back plane and includes and HTTP protocol interpreter, a PLC back-plane driver, a TCP/IP stack and an Ethernet board kernel, nowhere in *Baker* is there any disclosure or suggestion of configuring an OSI transport layer or above of a network interface device, which allows a programmable logic controller to operate on a network, as presently claimed. See, e.g. Abstract of *Baker*.

Contrary to the assertions in the Office Action, Column 4, lines 47-61 of *Baker* merely describe the web server providing a direct connection for a PLC to the Internet by plugging the web server into its back plane. The web server provides both a client and server interface. The client interface allows a user to send commands to a remote node over the Internet and the server interface allows for processing commands that originated from a remote node. *Baker* further describes a server using Transmission Control Protocol (TCP) in conjunction with Internet Protocol (IP) through a Transmission Control Protocol/Internet Protocol (TCP/IP) stack to interact with the network interface. The TCP/IP stack enables data transfers over the Internet between the user and the web site as required for the various layers specified by the IP protocol. See, e.g. Col. 4, Ins. 1-19 of *Baker*. Applicants respectfully submit that, while relating to computer networking and including a transport layer, the TCP/IP Reference Model is not the same as an OSI Reference Model. The OSI Reference Model came into existence before the TCP/IP Reference Model was

created. While each model includes layers, and each layer provides service to the layer above it, the OSI Reference Model has a 7-layer stack including a Physical layer, Datalink layer, Network layer, Transport layer, Session layer, Presentation layer, and Application layer, while the TCP/IP Reference Model has only 4-layers – Host to network or Link layer, Internet layer, Transport layer and an Application layer. Therefore, configuring an OSI transport layer or above, as presently claimed, provides for configuring an OSI transport layer, or a Session layer, a Presentation layer, and an Application layer. As *Baker* nowhere mentions an OSI transport layer, it follows *Baker* nowhere discloses or suggests configuration of an OSI transport layer or above, as presently claimed. Nor does *Baker* disclose or suggest “operating a programmable logic controller on a network via the configured OSI transport layer or above,” as presently claimed.

Further, as *Baker* uses the TCP/IP Reference Model for interaction with the network interface, there is no reason for *Baker* to use or configure an OSI transport layer or above. As the OSI transport layer provides for transparent transfer of data between end systems or hosts, configuration of the OSI transport layer or above of the network interface device provides for the PLC to operate and communicate on a network using standard OSI transport layer protocols. The configuration of the network interface device allows the PLC to become connected to the network, operate as a peer on the network, and support network functions such as email, ftp, smtp, etc. In other words, configuration of the OSI transport layer or above of the network interface device is a pre-requisite for supporting the operational functionality of the PLC on the network. See, e.g. paras. [72], [85] to [98] of Applicants’ specification.

Based upon the foregoing, it is submitted that neither *Cornett* nor *Baker*, alone or in combination, discloses or suggests all of the features recited in independent claims 1, 27, 28 and 29. As claims 2-3, 7-8, 10-24, and 26 depend

from, and incorporate the features of, claim 1, it is further submitted that claims 2-3, 7-8, 10-24, and 26 are patentable over the cited prior art for at least the reason they depend from allowable independent claims.

III. 103(a) Rejection of Claims 5-6

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over *Cornett* in view of *Baker* and further in view of U.S. Patent No. 5,983,269 to Mattson et al. ("*Mattson*").


Regarding the rejection of claims 5-6, as described above, neither *Cornett* nor *Baker*, alone or in combination, discloses or suggests all of the features recited in claim 1, the base claim from which claims 5-6 depend. Applicants respectfully submit that *Mattson* does not cure the deficiencies of the *Cornett* and *Baker* references. As claims 5-6 depend from, and incorporate the features of, claim 1, it is submitted that claims 5-6 are patentable over the references for at least the same reasons that claim 1 is patentable. Accordingly, withdrawal of the 103 rejections of the pending claims is respectfully requested.

IV. Conclusion

The Applicants believe all pending claims are in condition for allowance, and respectfully request reconsideration and allowance of the same.

If any additional time is required, please accept this paragraph as a request for such an Extension of Time and authorization to charge the requisite extension fee to Deposit Account No. 04-1696. Please charge any required new claim fees to Deposit Account No. 04-1696. If any other fees are required, please charge Deposit Account No. 04-1696. The Applicants encourage the Examiner to telephone Applicants' attorney should any issues remain.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Randall S. Wayland", with a stylized flourish at the end.

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